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(54) Title: ENZYMATIC SYNTHESIS OF N<sup>α</sup>-ACYL-L-ARGININE ESTERS

(57) Abstract: The invention relates to a process for preparing a Na-acyl-L-arginine ester, derived from fatty acids and esterified dibasic amino acids, according to the following formula (I), where: X- is Br-, Cl-, or HSO<sub>4</sub>- R1: is linear alkyl chain from an saturated fatty acid, or hydroxy-acid from 8 to 14 atoms of carbon bonded to the α- amino acid group through amidic bond. R2: is a linear or branched alkyl chain from 1 to 18 carbon atoms or aromatic. R3: is formula (II), where n can be from 0 to 4, from the appropriate organic acid and alcohol. The process is catalyzed by a hydrolase, more in particular a protease, the protease papain from Carica papaya being highly suitable. In order for the esterification reaction to run as wanted, the process is performed in a low-water-content organic medium. When the highly suitable papain from Carica papaya is used, a water activity of between 0,03 and 0,5 is selected.

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## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12P C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, MEDLINE, EPO-Internal, WPI Data, CHEM ABS Data, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BRAUN K ET AL: "Papain-catalyzed esterification of N-alpha-protected amino acids and dipeptides with ethanol in different organic systems." PHARMAZIE, vol. 52, no. 3, 1997, pages 203-206, XP001093713 ISSN: 0031-7144 abstract; figures 1-4 page 203, column 2, line 39 -page 204, column 1, line 2 ----	1-13
A	WO 97 30964 A (YISSUM RES DEV CO ;EYAL AHARON M (IL); SAXE BERNHARD D (US)) 28 August 1997 (1997-08-28) page 11, line 24 - line 25; claims 1,21,22 ----- -/--	1-13

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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